

Appln No. 10/079,293

Amdt date August 18, 2004

Reply to Office action of May 18, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claim 28 and add new claims 42 and 43 as follows:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)

9. (Previously Presented) A cutting element comprising:
a hard material body having an end surface symmetrical about a plane and a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line, and wherein the periphery line continuously extends around more than half of the circumference; and

an ultra hard material layer formed over the end surface having an exposed upper surface, said ultra hard material layer

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having a periphery and extending over both the canted and uncanted portions, wherein the ultra hard material layer comprises a thickness, wherein the thickness of the ultra hard material layer is maximum at a first location at the periphery of the ultra hard material layer at an intersection with the plane and wherein the thickness of the ultra hard material layer is minimum at a second location at the periphery of the ultra hard material layer at an intersection with the plane, wherein the second location is opposite the first location.

10. (Previously Presented) A cutting element as recited in claim 9 wherein the entire periphery line extends along a plane.

11. (Previously Presented) A cutting element as recited in claim 9 wherein the canted portion comprises a non-planar portion.

12. (Previously Presented) A cutting element as recited in claim 9 wherein the periphery line is non-linear.

13. (Previously Presented) A cutting element as recited in claim 9 wherein the uncanted portion is non-uniform.

14. (Previously Presented) A cutting element as recited in claim 13 wherein the uncanted portion comprises a non-uniform portion.

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15. (Previously Presented) A cutting element as recited in claim 9 wherein the ultra hard material layer comprises an exposed upper surface.

16. (Previously Presented) A cutting element comprising:
a hard material body having an end surface bounded by a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery, and an uncanted portion extending to the periphery wherein the canted portion intersects the periphery, wherein the entire intersection between the canted portion and the periphery occurs along a periphery line, and wherein the entire periphery line extends along a plane ; and

an ultra hard material layer formed over the end surface, said ultra hard material layer extending over both the canted and uncanted portions.

17. (Previously Presented) A cutting element as recited in claim 16 wherein the periphery line continuously extends around more than half of the circumference.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) A cutting element as recited in claim 16 wherein the ultra hard material layer comprises an exposed upper surface.

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21. (Previously Presented) A cutting element as recited in claim 16 wherein a non-uniform portion is formed on the canted portion.

22. (Previously Presented) A cutting element as recited in claim 16 wherein a non-uniform portion is formed on the uncanted portion.

23. (Previously Presented) A cutting element as recited in claim 9 wherein the body comprises a first axial length as measured from the canted portion and a second axial length as measured from the uncanted portion, wherein the first axial length is smaller than the second axial length.

24. (Previously Presented) A cutting element as recited in claim 16 wherein the body comprises a first axial length as measured from the canted portion and a second axial length as measured from the uncanted portion, wherein the first axial length is smaller than the second axial length.

25. (Previously Presented) A cutting element as recited in claim 9 wherein the uncanted portion comprises a non-uniform portion.

26. (Previously Presented) A cutting element comprising:
a hard material body having an end surface symmetrical about a plane and bounded by a periphery defining a

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circumference, the end surface comprising a canted portion extending to the periphery, and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line, and wherein the periphery line continuously extends around more than half of the circumference; and

an ultra hard material layer formed over the end surface, said ultra hard material layer having a periphery and extending over both the canted and uncanted portions, wherein the ultra hard material layer comprises a thickness, wherein the thickness of the ultra hard material layer is maximum at a first location at the periphery of the ultra hard material layer at an intersection with the plane and wherein the thickness of the ultra hard material layer is minimum at a second location at the periphery of the ultra hard material layer at an intersection with the plane, wherein the second location is opposite the first location.

27. (Previously Presented) A cutting element comprising:
a hard material body having an end surface symmetrical about a plane and bounded by a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery, and an uncanted portion comprising a non-uniform portion, said uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line; and

an ultra hard material layer formed over the end surface, said ultra hard material layer having a periphery and extending

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over both the canted and uncanted portions, wherein the ultra hard material layer comprises a thickness, wherein the thickness of the ultra hard material layer is maximum at a first location at the periphery of the ultra hard material layer at an intersection with the plane and wherein the thickness of the ultra hard material layer is minimum at a second location at the periphery of the ultra hard material layer at an intersection with the plane, wherein the second location is opposite the first location.

28. (Currently Amended) A cutting element comprising:
a hard material body having an end surface symmetrical about a first plane and bounded by a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery, and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line said periphery line extending along a second plane, wherein at least part of one of said canted and uncanted portions comprises a non-uniform portion;
and

an ultra hard material layer formed over the end surface, said ultra hard material layer having a periphery and extending over both the canted and uncanted portions, wherein the ultra hard material layer comprises a thickness, wherein the thickness of the ultra hard material layer is maximum at a first location at the periphery of the ultra hard material layer at an intersection with the first plane and wherein the thickness of the ultra hard material layer is minimum at a second location at

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the periphery of the ultra hard material layer at an intersection with the first plane, wherein the second location is opposite the first location.

29. (Previously Presented) A cutting element comprising: a hard material body having an end surface and a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery and an uncanted portion extending to the periphery, wherein the entire canted portion extending to the periphery intersects the periphery along a single periphery line extending along a plane, and wherein the periphery line continuously extends around more than half of the circumference; and

an ultra hard material layer formed over the end surface having an exposed upper surface.

30. (Previously Presented) A cutting element as recited in claim 29 wherein the canted portion comprises a non-uniform portion.

31. (Previously Presented) A cutting element as recited in claim 29 wherein the uncanted portion is non-uniform.

32. (Previously Presented) A cutting element as recited in claim 29 wherein the uncanted portion comprises a non-uniform portion.

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33. (Previously Presented) A cutting element as recited in claim 32 wherein the uncanted portion is non-uniform.

34. (Previously Presented) A cutting element as recited in claim 9 wherein said ultra hard material layer extends over the entire uncanted portion.

35. (Previously Presented) A cutting element as recited in claim 16 wherein said ultra hard material layer extends over the entire uncanted portion.

36. (Previously Presented) A cutting element as recited in claim 16 wherein said ultra hard material layer comprises a periphery, and wherein the periphery of said ultra hard material layer is aligned over the periphery of the body along the entire periphery line.

37. (Previously Presented) A cutting element as recited in claim 26 wherein said ultra hard material layer extends over the entire uncanted portion.

38. (Previously Presented) A cutting element as recited in claim 27 wherein said ultra hard material layer extends over the entire uncanted portion.

39. (Previously Presented) A cutting element as recited in claim 28 wherein said ultra hard material layer extends over the entire uncanted portion.

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40. (Previously Presented) A cutting element comprising:
a hard material body having an end surface and a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line, wherein the periphery line continuously extends around more than half of the circumference, and wherein the entire periphery line extends along a plane; and

an ultra hard material layer formed over the end surface having an exposed upper surface.

41. (Previously Presented) A cutting element comprising:
a hard material body having an end surface bounded by a periphery defining a circumference, the end surface comprising, a canted portion extending to the periphery, and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along a periphery line, wherein the entire periphery line extends along a plane, and wherein the periphery line continuously extends around more than half of the circumference; and

an ultra hard material layer formed over the end surface.

42. (New) A cutting element comprising:
a hard material body having an end surface bonded by a periphery defining a circumference, the entire end surface being canted and extending to the periphery, wherein the canted end

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surface intersects the periphery along the periphery line, wherein the entire periphery line extends along the plane; and
an ultra hard material layer formed over the end surface.

43. (New) A cutting element comprising:

a hard material body having an end surface symmetrical about a plane and bounded by a periphery defining a circumference, the end surface comprising a canted portion extending to the periphery, and an uncanted portion extending to the periphery, wherein the canted portion intersects the periphery along the periphery line, wherein at least part of one of said canted and uncanted portions comprises a non-uniform portion; and an ultra hard material layer formed over the end, said ultra hard material layer having a periphery and extending over both the canted and uncanted portions, wherein the ultra hard material layer comprises a thickness, wherein the thickness of the ultra hard material layer is a maximum at a first location at the periphery of the ultra hard material layer at an intersection where the plane and wherein the thickness of the ultra hard material layer is minimum at a second location at the periphery of the ultra hard material layer at an intersection with a plane, wherein the second location is opposite the first location.